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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/722,697 | 11/28/2000 | Katsuya Irie | 1466.1017 | 4563 |

21171 7590 10/04/2002

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[REDACTED] EXAMINER

HARPER, HOLLY R

[REDACTED] ART UNIT

[REDACTED] PAPER NUMBER

2879

DATE MAILED: 10/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

(W)

| | | |
|-----------------|-----------------|--------------|
| | Application No. | Applicant(s) |
| | 09/722,697 | IRIE ET AL. |
| Examiner | Art Unit | |
| Holly R. Harper | 2879 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-7 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 11/28/00 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

| | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figure 12 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: On page 16, Line 3, “blue cell” should be green cell.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Referring to claim 1, the subject claimed lacks a conventional transitional phrase, such as, comprising or having, etc. Consequently it is unclear as to where the preamble begins and ends. In fact, the claim could be considered as entirely consisting of a preamble having no limitations. In the instant case, it is understood that the applicant intended to claim a gas discharge display device that reproduces a color of each pixel of a color image by controlling light emission quantities of three kinds of cells having

different light emission colors, wherein a mixed color of the light emission colors of the three kinds of cells when reproducing a white color is set to a color defined by chromaticity coordinates in which a positive or negative deviation from a blackbody locus is generated in a chromaticity diagram, comprising a filter disposed at the front side of the three kinds of cells, the filter having spectral characteristics of converting the mixed color to a color having a higher color temperature and defined by chromaticity coordinates that is close to the blackbody locus.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 2, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teng et al (USPN 6,229,252) hereinafter “Teng” in view of Ushifusa et al. (USPN 5,818,168) hereinafter “Ushifusa.”

The Teng reference discloses a filter that increases the color temperature (Column 11 and 12, Table 2) of the mixed color. The filter can be free standing in front of a plasma display device or adherable to the device surface (Column 3, Lines 19-23). Although, the Teng reference discloses a filter for use with display devices, it does not disclose the structural limitations of a plasma display device. The Ushifusa reference discloses that the plasma display device has blue, green, and red phosphors (a type of fluorescent) each in their own discharge cell (Column 13, Lines 55-63). Three different

color phosphors are used to create a color display device rather than a chromatic one. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use red, blue, and green phosphors, as taught by Ushifusa, to create a color display device.

In regard to claim 7, the Teng reference further discloses a filter with an absorption peak falling into the wavelength region of 550 nanometers to 610 nanometers (Column 11, Lines 20-21). The filter substantially increases the transmission of the primary colors from the reflected light of a color display device while substantially absorbing the non-primary colors, and thereby improves the contrast and color of the image for the viewers (Column 4, Lines 31-35).

7. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teng and Ushifusa as applied to claims 1 and 2 above and in view of Ilcisin et al. (USPN 5,990,619) hereinafter “Ilcisin.”

The Teng and Ushifusa references don’t disclose the use of uneven structural conditions where the structure conditions are effective areas of the electrodes. The Ilcisin reference teaches the use of nonuniform electrodes in plasma display devices. The nonuniformities include surface nonuniformities, bulk nonuniformities, and geometric nonuniformities (Column 2, Lines 58-62). Nonuniform electrodes have improved quality because of reduced firing voltages in one plasma channel region compared to another, reduced sputtering damage, reduced total plasma discharge current, decreased discharge initiation time, and decreased ionized gas decay time (Column 2, Line 66- Column 3, Line 4). It would have been obvious to one of ordinary skill in the art at the time the

Art Unit: 2879

invention was made to create electrodes with surface nonuniformities, as taught by Ilcisin, to enhance the color quality.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Teng and Ushifusa as applied to claims 1 and 2 above and in view of Shiiki et al. (USPN 6,411,032) hereinafter “Shiiki.”

The Teng and Ushifusa references don’t disclose the use of discharge cells with varying widths. Shiiki teaches that a plasma display device can be created with varying spaces between the barrier ribs for defining discharge spaces for the red, blue, and green colors. (Column 2, Lines 45-50 and Figure 1) This configuration would allow adjustment of the color temperature of white color by adjusting the luminance balance of red, blue, and green light emissions (Column 3, Lines 3-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to vary the widths of the discharge cells, as taught by Shiiki, to enhance the color reproducibility.

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Teng and Ushifusa as applied to claims 1 and 2 above and in view of Wedding (USPN 5,793,158).

The Teng and Ushifusa references don’t disclose a plasma display device with varying thickness values of the dielectric layers that cover electrodes for generating gas discharge. Wedding teaches that a plasma display device can be created with a different dielectric thickness over the electrodes. By varying the thickness, adjustments can be made for differences in power input and brightness output for each phosphor. (Column 14, Lines 13-21) It would have been obvious to one of ordinary skill in the art at the time

the invention was made to vary the dielectric thickness, as taught by Wedding, to increase the color quality of the plasma display device.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly R. Harper whose telephone number is 703.305.7908. The examiner can normally be reached on Monday through Friday (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 703.305.4794. The fax phone numbers for the organization where this application or proceeding is assigned are 703.308.7382 for regular communications and 703.308.7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.308.0956.

hrh
September 23, 2002


MICHAEL H. DAY
PRIMARY EXAMINER